

(No Model.)

R. I. HERRMANN.
FIRE ESCAPE.

No. 560,713.

Patented May 26, 1896.

FIG. 2.

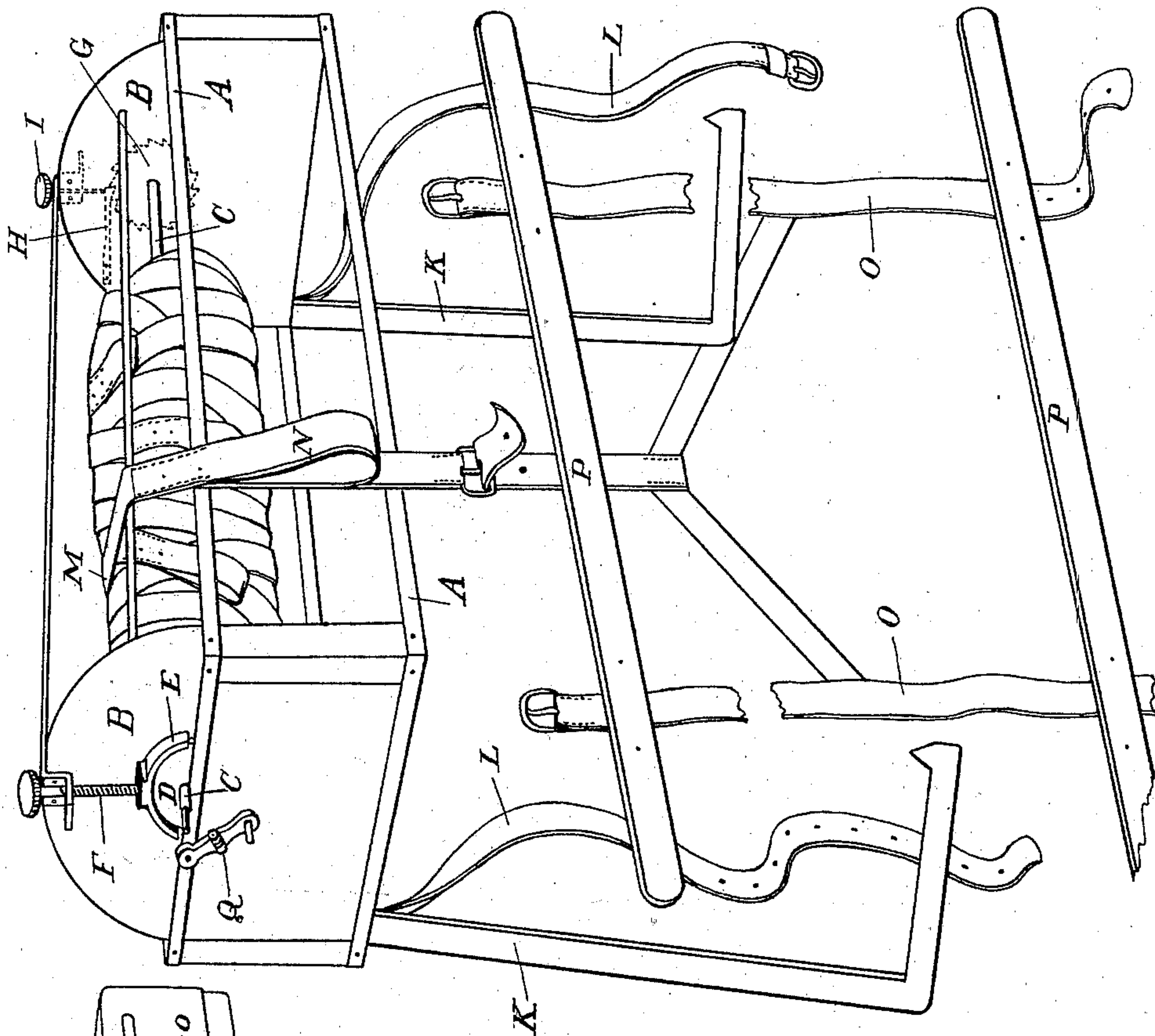


FIG. 1.

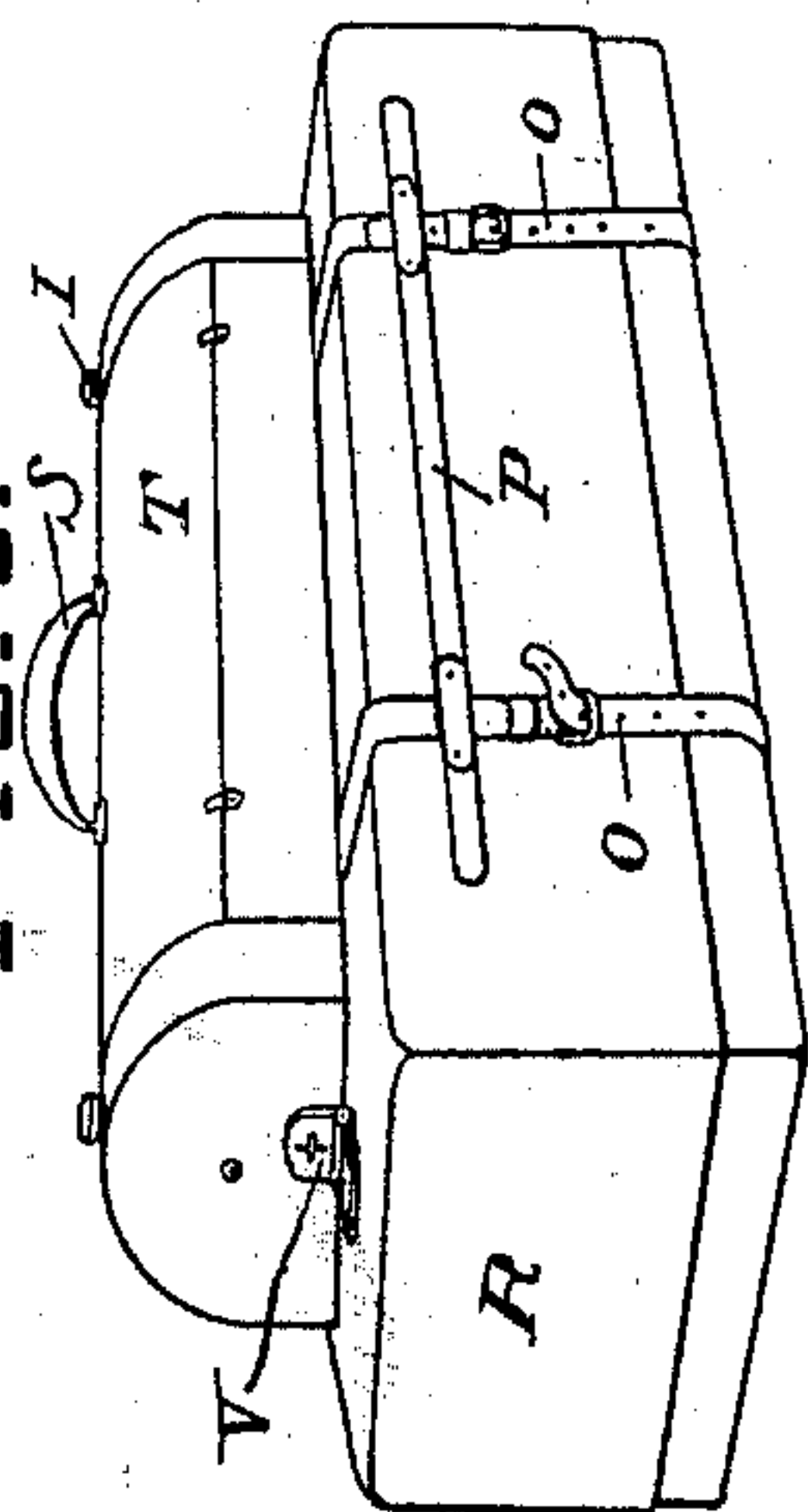
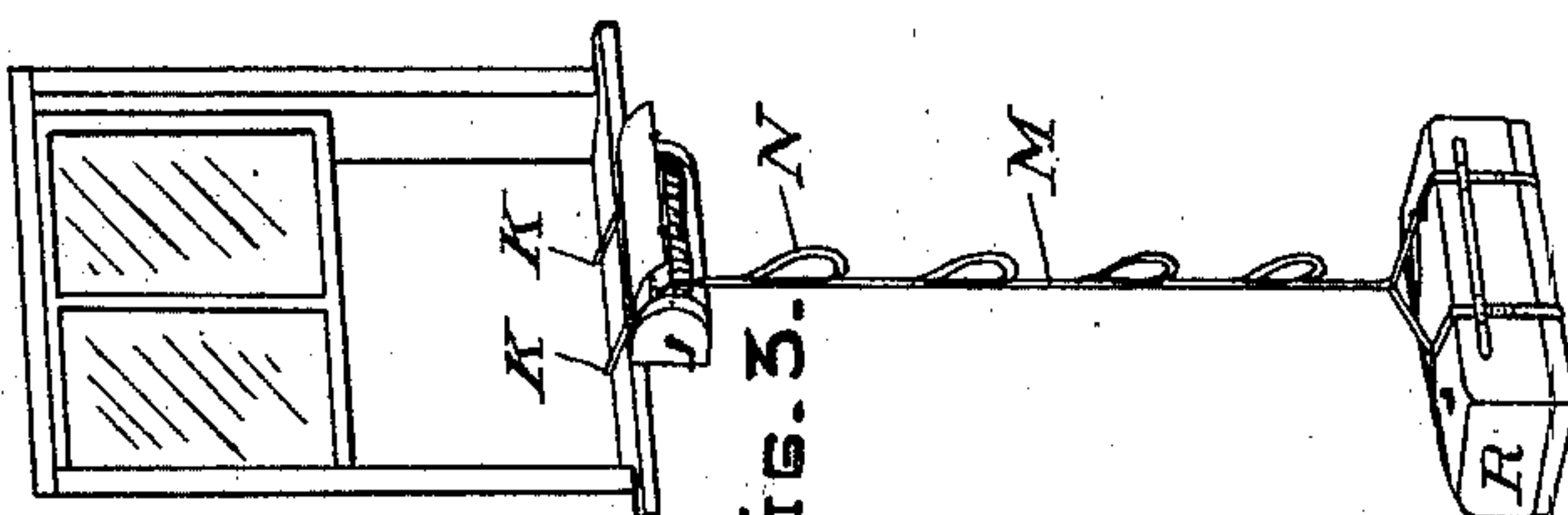


FIG. 3.



Witnesses
Robt. A. Mitchell
W. H. McFarland.

Rinehart I. Herrmann,
Inventor

By
Geo. D. Mitchell

Attorney

UNITED STATES PATENT OFFICE.

RINEHART I. HERRMANN, OF COVINGTON, PENNSYLVANIA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 560,713, dated May 26, 1896.

Application filed December 10, 1895. Serial No. 571,680. (No model.)

To all whom it may concern:

Be it known that I, RINEHART I. HERRMANN, a citizen of the United States, residing at Covington, in the county of Tioga and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in fire-escapes.

It has for its object to provide a combination portable ladder and shawl-strap for the use of travelers and others. My aim in devising this combination is to furnish a light and economical portable fire-escape that may be strapped around the traveler's valise or other baggage, so as not only to serve a convenient purpose, but to be always ready for use in case of emergency, the baggage being also used to steady the ladder, as I shall hereinafter describe. In order to attain this object, I have devised the construction and arrangement of parts illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view showing my combination fire-escape and shawl-strap as applied to an ordinary telescope-valise. Fig. 2 is a like view of the escape alone, the outer covering being removed to show the interior arrangement of parts and the ladder and grapples being released; and Fig. 3 shows the escape adjusted on the sill of a window and the ladder in process of being unwound.

Similar letters of reference refer to similar parts where they occur in the different views.

Referring now to the drawings, Fig. 2, A A is the framework of the escape, made of suitable metal, as light as possible consistent with the necessary strength.

B B are metallic end pieces, made in the shape shown, to stiffen the framework, confine the ladder when wound up, and furnish bearings for the reel-shaft.

D is a disk or hub mounted rigidly on one end of the reel-shaft C, outside of the end piece B. Over this disk fits the shoe E, capable of being forced into firm frictional contact with the disk by means of the screw F,

mounted on the end piece B, as shown. Any other appropriate form of brake, however, may be substituted for this one, or I may make cheaper forms of my device without any brake at all, its office being performed by the ratchet arrangement that I will now describe. On the opposite end of the shaft C, in the same relative position as the disk D, is rigidly fixed a ratchet G. (Shown in dotted lines.) Acting in connection with this ratchet is the spring-pawl H, which may be lifted off the ratchet by means of the release-button I. Flexibly attached to one side of the frame, at opposite ends thereof, are the metal grapples K K. I also provide straps L L at each end, as shown, fastened to the frame at the same point, which may be buckled together or otherwise used to hold the escape when in use. Both the grapples and straps fold up inside the escape, out of the way, when the device is being used as a shawl-strap. Wound around the shaft C is the flexible ladder M. I have shown this ladder in the form of a single strip provided with loops, as N, for the feet. It may be made of strong webbing, leather, rope, or similar material. While the single-strip ladder is lighter and takes up less space, I may, of course, employ a ladder made of two strips, with cross strips or rungs, in the usual form. At the free end of the ladder I provide two straps O O with stiff cross-pieces P P, as shown, adapted to securely hold a valise or bundle R when buckled around it. Sometimes when the escape is to be used for carrying a bundle of loose articles I make this end portion of the ladder of netting instead of simply straps.

Q is a folding crank for winding up the ladder, adapted to be carried in the vest-pocket.

S is a handle on the escape for carrying the baggage by.

T is a covering to the escape, made of any appropriate material, inclosing the reel and framework.

The various parts of my invention being constructed and arranged as described, its operation is as follows: The traveler buckles the straps O O around his valise, telescope, or other baggage, and applying the crank Q to the shaft C winds up the slack in the ladder

till the escape is tightly held against the top of the baggage, as shown in Fig. 1, the ratchet-and-pawl arrangement holding the ladder tightly wound. When the traveler desires to open his baggage, he releases the pawl by means of the button I and unbuckles the straps O O. In case of fire the traveler buckles the straps around his baggage, as before, and fastens the escape securely to the window-sill by means of the grapples K K. If necessary, the straps L L may be buckled around a bed-slat placed across the window, or otherwise secured. The traveler then releases the ratchet-pawl by means of the button I and the baggage R descends of its own weight to the ground, its descent being controlled by means of the brake-screw F. When the baggage has reached the ground, the pawl is allowed to engage the ratchet again, so as to prevent the ladder from unwinding farther. The weight of the baggage at the end of the ladder holds the ladder steady, so that the traveler may descend with more ease. Another advantage is that by this means the traveler is sure to save his baggage as well as himself.

Sometimes I provide my escape with a small hasp-and-button fastening V, by which the escape proper can be secured positively to the valise, as illustrated in Fig. 1, the hinge part of the fastening being riveted to the top of the telescope. I can use the same arrangement for fastening my escape to the back of a fireman's coat, so that the fireman may have it ready for instant use wherever he may be.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. A fire-escape and shawl-strap comprising a crank-operated reel, a flexible ladder wound thereon, means at the free end of said ladder for holding a piece of baggage, means for holding the reel rigid at any stage of the unwinding and means for fastening the reel to a support.

2. A fire-escape, comprising a reel, a flexible ladder wound thereon, a ratchet and pawl for holding the reel rigid at any stage of the unwinding, a friction-brake for controlling the speed of the unwinding, means at the free end of the ladder for holding a piece of baggage and means for securing the reel to a fixed support.

3. A fire-escape and shawl-strap comprising a reel-shaft, suitably mounted in a reel-frame, a flexible ladder wound on said shaft, a ratchet rigidly mounted on one end of said reel-shaft, a pawl engaging therewith, a disk or hub rigidly mounted on the other end of said reel-shaft, a friction-brake bearing thereon, a crank for attachment to the reel-shaft, grapples attached to the reel-frame and a pair of adjustable straps attached at the free end of the ladder, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

RINEHART I. HERRMANN.

Witnesses:

JOHN E. BROWNE,
W. W. ROBINSON.